

# Spectrum of Lesions Found During Endoscopic Retrograde Cholangiopancreatography in Patients with Obstructive Jaundice

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## ABSTRACT

**Aim:** To determine the frequency of malignant and benign lesion in patients presenting with obstructive jaundice.

**Study Design:** Cross sectional study

**Place and duration of study:** Department of Medicine, Lahore General Hospital from 1<sup>st</sup> November 2016 to 30<sup>th</sup> April 2017.

**Methodology:** One hundred and fifty patients from indoor as well as outpatient department were enrolled. All the patients of any gender with age between 25-60 years were included. Patients was considered as case of obstructive jaundice if serum bilirubin level >1.2mg/dl and blockage in the bile duct (>50mm narrowing) confirmed by CT scan. Later on patient was advised for biopsy of the bile duct so that the lesion could be categorized whether it is malignant or benign.

**Results:** The mean age was 42±10.50 years. Ninety six (64%) were female and 54 (36%) were male cases. One hundred and twenty one (80.7%) were benign tumor while 29 (19.3%) were malignant. According to sub-types, bile duct was in 91(60.7%) and stricture in 30(20%).

**Conclusion:** There is high frequency of benign tumor among the patients with the obstructive jaundice and hence it is needed to evaluate all such cases with this condition.

**Keyword:** Obstructive jaundice, Benign tumor, Malignant tumor, Endoscopic retrograde cholangiopancreatography (ERCP)

## INTRODUCTION

Disorders of the biliary tract affect a significant portion of the worldwide population, and the overwhelming majority of cases are attributable to cholelithiasis (gallstones). In the United States, 20% of persons older than 65 years have gallstones and 1 million newly diagnosed cases of gallstones are reported each year<sup>1</sup>.

To study the epidemiology of jaundice, study was conducted on 174 patients to find the efficacy of ERCP as a treatment protocol in Continental Croatia. Obstructive jaundice mainly affects elderly population.<sup>2</sup> Gallstone can be another cause of jaundice due to biliary obstruction. Its tendency was higher in females as compared to males. This increased risk is likely caused by the effect of estrogen on the liver, causing it to remove more cholesterol from the blood and diverting it into the bile<sup>3</sup>.

Biliary obstruction in jaundice can be instigated by various diseases and conditions<sup>4</sup>. Etiologies varied widely from population to population. Exact diagnosis of the obstruction is important to determine, otherwise it can cause significant problems. Sun et al<sup>5</sup> studied the 215 patients complaining of obstructive jaundice 201 patients (93.4%) were benign obstructions and 14(6.5%) were malignant ones. In another study, incidence was higher in females and majority of the patients had gallstones. On the other hand, malignant diseases were also reported in few patients, out of which pancreatic cancer was prevalent<sup>2</sup>.

The objective of the study was to determine the frequency of malignant and benign lesion in patients presenting with obstructive jaundice.

## MATERIALS AND METHODS

After approval of Ethical Review Committee, this cross-sectional study was carried out at Department of Medicine, Lahore General Hospital, Lahore from 1<sup>st</sup> November 2016 to 30<sup>th</sup> April 2017 and 150 patients were enrolled. All patients of both genders, age between 25 to 60 years and confirmed for obstructive jaundice were included. Patients with any other previous GI problem, treatment for tumors, gone through any surgery related to biliary obstruction and renal problem like kidney stone assessed on X-ray were excluded. Later on patients was checked for the presence of

obstructive jaundice as per stated in the operational definition. Later on patient was advised for biopsy of the bile duct so that the lesion could be categorized whether it is malignant or benign. Lesion was considered as benign and malignant as per operational definition. Data was entered and analyzed through SPSS-20.

## RESULTS

The mean age was 42±10.50 years. Ninety six (64%) were female cases while 54(36%) were male cases. There were 121 (80.7%) were benign tumor while 29(19.3%) were malignant. The sub-type as noted that bile duct types was in 91(60.7%) and stricture in 30(20%) [Table 1].

Table1: Demographic information of the patients (n=150)

Variable	No.	%
Age	42.92±10.50	
<b>Gender</b>		
Male	54	36.0
Female	96	64.0
<b>Type of Carcinoma</b>		
Benign	121	80.7
Malignant	29	19.3
<b>Sub-type of Lesions</b>		
Bile duct stone	91	60.7
Stricture	30	20.0
Cholangiocarcinoma	8	5.3
Carcinoma of Gall bladder	4	2.7
Periapillary carcinoma	8	5.3
Carcinoma head of pancreas	9	6.0

## DISCUSSION

Obstructive jaundice is caused by biliary obstruction and is a prevalent medical problem mainly affecting females.<sup>6</sup> It is one of the most predominant problems that encountered by surgeons and medical staff resulting into high mortality and morbidity<sup>7</sup>. Early/exact diagnosis and timely treatment would prove beneficial for the disease. Etiologies of the jaundice varied widely on the basis of different geographical regions and lead to various other complications as well<sup>8</sup>.

Various treatment protocols are present some of which are invasive and other are non-invasive<sup>9</sup>. Few invasive tests that are used for the treatment purpose are PTC, computed tomography

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(CT), MRCP and ERCP but some of which are not available in most under-developed countries<sup>10,11</sup> and ultrasonography is the most common diagnostic test that is left behind<sup>12</sup>. In this present study, this problem appeared to be more common among males in contrast to females. Mean age of the study participants were 42.92±10.50 years which is somewhat similar to the already published data<sup>13-15</sup>.

Although CT scan, PTC, MRCP and ERCP are the standard procedures but these protocols are operator sensitive and also very expensive and complication rate is also higher underlying conditions such as bowel proliferation, sepsis and pancreatitis, if present cause hurdle in primary diagnosis of the disease. PTC and ERC are proved useful in intrabiliary thrombi analysis<sup>16,17</sup>. Therefore, there is dire need of exact diagnosis of the problem to combat the deadly consequences.

## CONCLUSION

Endoscopic retrograde cholangiopancreatography is an efficient procedure for analyzing various lesions. Obstructive jaundice is more common in females than males with bile stone being the major lesion subtype. However benign conditions are more prevalent than malignant tumors.

**Conflict of interest:** Nil

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